

the fall after graduation in June, and are making most satisfactory progress.

The future welfare and prosperity of the Northern Normal is assured, since its permanency and growth seem to be a matter of personal pride on the part of every loyal Arizonian. It has no enemies within the borders of this broad territory. The Northern Normal and all other educational institutions in Arizona have friends on the hill top and in the valley, in every hamlet, mining camp and city, indeed their friends are legion, and they share in grateful pride in the present success and future promise, not only of the Northern Normal, but the Southern at Tempe, the University at Tucson and the public school system throughout the territory.

ing fifteen passengers each will at once be ordered by a company organized in Flagstaff. This company expects to open up a line of rapid transit between Flagstaff and the Grand Canyon, a distance of sixty-five miles, and each automobile will make the round trip of 130 miles once a day.

The machine which is to be used in testing the practicability of this represents the very latest type of automobile construction. From bell to whistle it is a perfect locomotive. Its engines are 10-horse power high speed marine engines, copied after the United States torpedo boat type, fitted with water coil and flash boilers.

There is a storage capacity for thirty gallons of oil and fifty-seven gallons of water. The

The chauffeur manages forward and backward movements and entire action of the machine with a single small lever at the side of the seat. The engines can be reversed with absolute safety at high speed. A double friction bearing brake will bring the vehicle to a stop at once. Three people can be accommodated on the front seat, while the trailer, which is a part of the machine itself, will accommodate three more.

The party, consisting of Oliver Lippincott, T. M. Chapman and a representative of the Herald, will leave Los Angeles to meet the automobile, which is appropriately called "Toledo" after the town of its manufacture, at Flagstaff.

Mr. Lippincott, on account of his long experience, was chosen

ARIZONA.

She led me faint across the sullen blight
Of the warped desert; then these eyes
Of mine
She touched with life, and lo, incarnadine
Stretched the fair skies o'er joyful valleys, dight
In palm and citrus. Still pursued our flight
Up mountain slope, through the mysterious pine,
Down to the sculptured deep of her Design
Of Matter singing to Supernal Might.
"These are my realms!" she said: I turned to gaze
On her who, erst unseen, had guided me;
And lo, a child's face, framed in silken hair,
Shone glorious on me, like her skies ablaze
With sunset; but, a child still, limbed was she
Like the young lion in his native lair.
—HARRISON CONRAD.

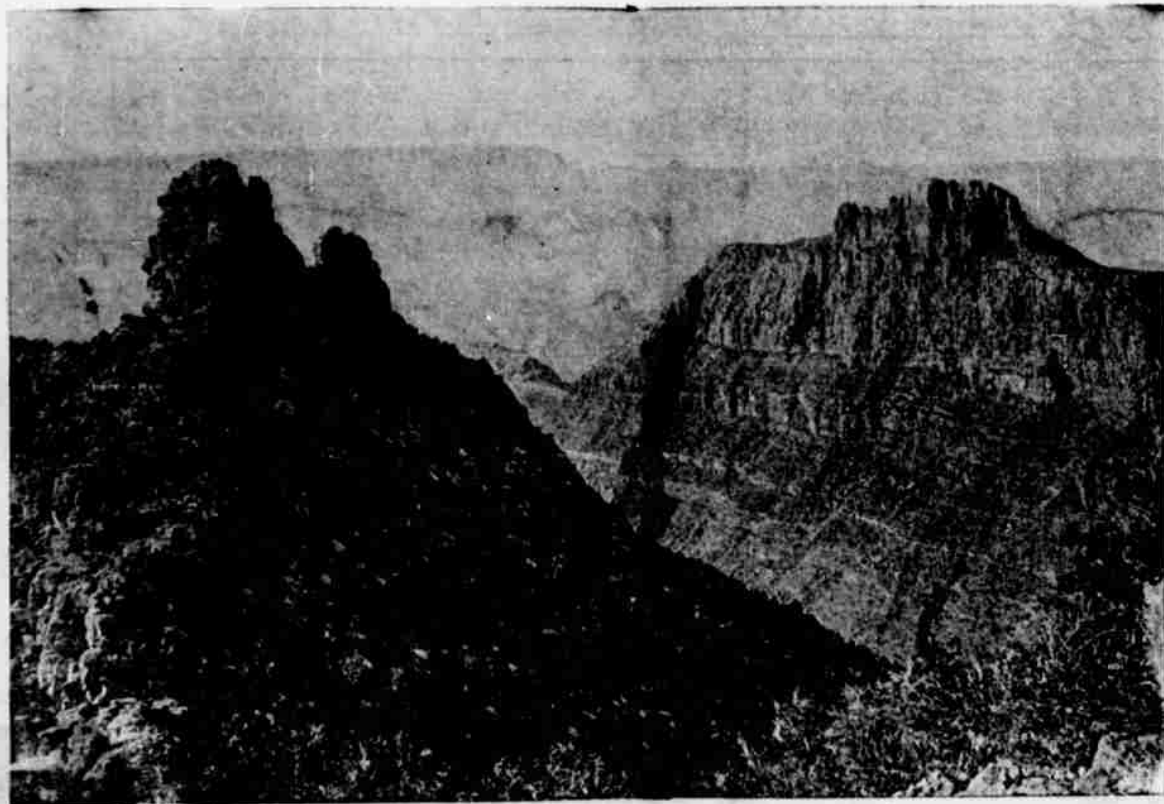
Conscientious Rats.

The Arizona rats in some places seem to have become infected with the enterprising spirit of the country. They have actually embarked in the business of trading. At Challender, in this county, some time ago, a party of lumbermen took possession of a cabin which they had been informed was fully furnished, but instead of the knives, forks and spoons they expected to find, behold, there were piles of pebbles and sticks and other heaps of rubbish. When they complained to the man who had sold them the cabin, he was at first much astonished, for stealing is not very common among lumbermen and miners, as it is too severely treated when an offender is discovered. On hearing of the rubbish heaps, however, he said that the "trade rats" must be the culprits. "Trade what?" exclaimed the disappointed men. "Rats," he said. "We have a species here that can no more resist the shining metal than can a magpie or a jackdaw, but so conscientious are they that, whenever they remove an article, they bring back what they think is an equivalent in different kinds of rubbish." At first the men were inclined to resent this information, considering it an Arizona "tall" story, but, on investigation, they found the facts to be just as their informer stated them. These rats are also common in Canada.

Arizona has the largest unbroken pine forest in the United States, covering an area of over 6,000 square miles.

The leasing system, so prevalent in Colorado, has never obtained to any extent in Arizona and California.

The United States government gave Mexico \$10,000,000 for the southern portion of Arizona and New Mexico.



SCENE IN THE GRAND CANYON.

AUTOMOBILE LINE.

The Experiment Now Being
Tried Between Flagstaff
and Grand Canyon.

COACHES TO CARRY FIFTEEN.

The Machines to Make the Round
Trip Once a Day—The Very
Latest Pattern of Auto-
mobile to be Used.

The experiment of running an automobile from Flagstaff to the Grand Canyon is attracting attention all over the coast. In a recent issue the Los Angeles Herald says:

If the experimental test of the steam automobile which Oliver Lippincott is to make on December 31 from Flagstaff to the Grand Canyon is successful, three big steam coaches accommodat-

water reservoir is filled by a patent siphon operated by the engine's own steam. Its speed test, which was made between Toledo and Detroit, is forty-two miles an hour under 175 pounds of steam. The tires of the machine are four inches in width, with solid rubber an inch and a half in thickness.

The weight of this powerful machine, ready for the start, is about 2,200 pounds, and mud, snow or ice cannot seriously impede its progress.

Back of the dashboard is the air gauge and marine clock. On the right driving wheel is a cyclometer recording distances traveled, so arranged by an electrical contrivance as to register each mile and the time in which it is made. It registers time of all stops made for renewing fuel or water. On the front is a headlight twelve inches in diameter of 200 candle-power, lighted with acetylene gas.

to make this experimental trial, on behalf of the manufacturers. He anticipates a very successful issue to the trial and expects to make the sixty-five miles to the point on Grand Canyon known as Hance's in considerably less time than the prescribed four hours.

The big copper mines of Arizona are none of them very deep. The deepest workings of the copper Queen are 1,000 feet, and of the United Verde 850 feet. In these mines most of the ore thus far taken out is from points above the 600-foot level. The extreme depths given represent late development shafts.

The big copper companies of Arizona each have from twenty to one hundred full claims of twenty acres each.

The Congress is the deepest mine in Arizona. It has an incline shaft 3,250 feet in length.